

ABSTRACT

A facing targets sputtering device for semiconductor fabrication includes an air-tight chamber in which an inert gas is admittable and exhaustible; a pair of target plates placed at opposite ends of said air-tight chamber respectively so as to face each other and 5 form a plasma region therebetween; a pair of magnets respectively disposed adjacent to said target plates such that magnet poles of different polarities face each other across said plasma region thereby to establish a magnetic field of said plasma region between said target plates; a substrate holder disposed adjacent to said plasma region, said substrate holder adapted to hold a substrate on which an alloyed thin film is to be deposited; and a 10 back-bias power supply coupled to the substrate holder.